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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,579	04/20/2006	Daniel Dupuis	OSSUR.908APC	1495

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EXAMINER

NGUYEN, XUAN LAN T

ART UNIT	PAPER NUMBER
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3657

NOTIFICATION DATE	DELIVERY MODE
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11/08/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/553,579	Applicant(s) DUPUIS ET AL.	
	Examiner Lan Nguyen	Art Unit 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-16 and 21-31 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 and 21-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

- It does not identify the citizenship of each inventor.
- Applicants checked the box to NOT claim priority to application 60/463,339.

2. It is noted that Applicants have not corrected the defects in the Oath based on the objection dated 02/05/09. The objection is repeated above.

Election/Restrictions

3. Applicants amended claim 1 to include a joint assembly and how the brake interacts with the joint assembly. The structures of the joint assembly and how it interacts with the SMA brake are particular to the combination of a prosthesis as recited in the non-elected claim 14. Originally, Applicants had elected the invention of the brake to be examined. It is reminded that claims 1-3 and 5-13 need to be free from the limitations of a combination, as originally elected. Therefore, the joint assembly and how it interacts with the SMA brake as amended are not further treated.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 and 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniels (6,045,076) in view of Chu (5,831,417).

Re: claim 1, Daniels shows a friction brake assembly, in figure 26(b), to act between a main actuator, a reel, and a linear shaft 353 relatively moveable with respect to said main actuator, as in the present invention, comprising: a brake member 346 connected to said linear shaft, a carrier 348 connected to said main actuator; a friction pad (not shown but inherent in a brake shoe) attached to said carrier for engagement with said brake member; a first actuator 344 including at least one shape memory alloy element, said first actuator being operable upon said carrier to move said friction pad into engagement with said brake member, wherein the engagement of said friction pad with said brake member inhibits longitudinal displacement of said linear shaft 353; and a second actuator 357 being operable upon said carrier to move said friction pad away from said brake member, wherein the moving away of said friction pad from said brake member allows longitudinal displacement of said linear shaft and a control circuit 50 to operate selectively said first actuator. Daniels shows a spring as a second actuator while the claim requires an SMA as a second actuator. Chu is relied upon to teach the concept of having two SMA actuators in figure 5. As shown, the reel mechanism 335 is

Art Unit: 3657

actuated by two SMA actuators 305A and 305B wherein actuator 305A engages the drag while actuator 305B releases the drag of the reel mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Daniel's brake to employ an SMA actuator as a second actuator in the brake of Daniel instead of a spring, in order to maintain an engage state or a release state of the brake without constant supply of current to each SMA as taught by Chu. Note that as modified by Chu, the two SMA actuators would only change in length when the electric current is applied thereto but would remain unchanged upon removal of the current, as claimed.

Re: claims 2, 3, 8 and 9, figure 26(b) of Daniels shows a horizontal beam as a connection for the SMA actuator 344 and spring actuator 357 as in Applicants'. As modified by Chu, the horizontal beam of Daniels would be a connection for both SMA actuators.

Re: claims 5, 6 and 10-12, Daniels show said shape memory alloy elements 344 are tensile elements and said control circuit 50 changes the length of said elements to actuate said brake.

Re: claim 7, Daniels shows the brake member as a drum 346 rotatably mounted on said main actuator and said carrier 348 is pivotally secured to said actuator 344 and said would be second actuator as modified by Chu for movement into or out of engagement with said drum.

Art Unit: 3657

Re: claim 13, Daniels shows said carrier 348 is pivotally mounted for movement about an axis, axis of shaft 353, parallel to but spaced from the axis of rotation of said drum 346.

Response to Arguments

6. Applicants' arguments filed 9/15/10 have been fully considered.

- The amendments to claim 1 has overcome the new matter rejection. The rejection has been withdrawn.
- The argument with respect to the election/restriction objection is found to be non-persuasive. The objection is repeated above. Paragraph [0028] of Applicants shows that the prosthesis has a joint assembly, a brake and many other sub-devices to make up the prosthesis. Originally, Applicants had elected the sub-device of the brake to be examined. The joint assembly and other sub-devices are deemed to belong to the combination of the prosthesis which was the non-elected invention. Applicants are advised to amend the claims to include only the features of the brake as originally presented and elected.
- Applicants' arguments with respect to the rejection based on Daniels in view of Chu have been found to be non persuasive. Applicant argues that the SMA of Daniels changes in length due to the pulling of the spring 357 unlike the SMAs of Applicants which do not change in length when the current is removed. Applicants are correct. Chu teaches this feature. Chu shows clearly in column 5, lines 17-35, especially lines 34, 35, where it states: "For unchanged drag level,

Art Unit: 3657

neither of the switches is turned on." This clearly means that when the current is removed, the positions of the two SMA are maintained without changing. As modified by Chu, Daniels' brake would comprise the two SMA with this feature of having the SMA unchanged when the current is removed and changed only when the current is applied. Applicants further argue that the device 335 is a drag device and not a brake. It is believed that the drag device is a brake in that it retards the motion to increase or decrease drag. Applicants also argue that the shaft 353 of Daniels does not comprise a longitudinal displacement. Applicants' argument is more specific than the claim language. The claims do not claim that the shaft is moved longitudinally relative to the main actuator. The claims simply states that the brake allows longitudinal displacement. When the brake of Daniels is released, the brake allows movements of shaft 353 in the same manner as Applicants' brake.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicants is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 3657

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is (571) 272-7121. The examiner can normally be reached on Monday through Friday, 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Xuan Lan Nguyen/
Primary Examiner
Art Unit 3657